



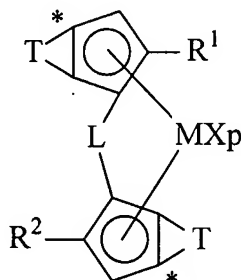
ATTACHMENT A

Claims 1 - 17: (Cancelled)

18. (Currently Amended) A multistage process comprising the following steps:

- polymerizing a polypropylene resin optionally comprising one or more monomers selected from ethylene and alpha olefins of formula  $\text{CH}_2=\text{CHT}^1$ , wherein  $\text{T}^1$  is a  $\text{C}_2\text{-C}_{20}$  alkyl radical in presence of a catalyst system, the catalyst system supported on a porous organic polymer, comprising:

- i) at least one metallocene compound of formula (I):



(I)

wherein

M is a transition metal selected from those belonging to group 3, 4, 5, 6 or to a lanthanide or actinide group in the Periodic Table of the Elements;

p is an integer from 0 to 3, wherein p is equal to a formal oxidation state of M minus 2;

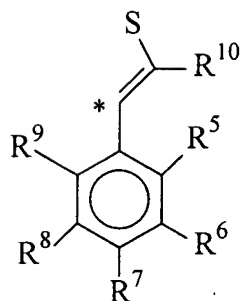
X, same or different, is hydrogen, a halogen, or R, OR, OSO<sub>2</sub>CF<sub>3</sub>, OCOR, SR, NR<sub>2</sub> or PR<sub>2</sub>, wherein R is a linear or branched, saturated or unsaturated C<sub>1</sub>-C<sub>20</sub> alkyl, C<sub>3</sub>-C<sub>20</sub> cycloalkyl, C<sub>6</sub>-C<sub>20</sub> aryl, C<sub>7</sub>-C<sub>20</sub> alkylaryl or C<sub>7</sub>-C<sub>20</sub> arylalkyl radical, optionally containing heteroatoms belonging to groups 13-17 of the Periodic Table of the Elements; or two X can optionally form a substituted or unsubstituted butadienyl radical or OR'O, wherein R' is a divalent radical selected from C<sub>1</sub>-C<sub>20</sub> alkylidene, C<sub>6</sub>-C<sub>40</sub> arylidene, C<sub>7</sub>-C<sub>40</sub> alkylarylidene and C<sub>7</sub>-C<sub>40</sub> arylalkylidene radicals;

L is a divalent bridging group selected from C<sub>1</sub>-C<sub>20</sub> alkylidene, C<sub>3</sub>-C<sub>20</sub> cycloalkylidene, C<sub>6</sub>-C<sub>20</sub> arylidene, C<sub>7</sub>-C<sub>20</sub> alkylarylidene, or C<sub>7</sub>-C<sub>20</sub> arylalkylidene radicals optionally containing heteroatoms belonging to groups 13-17 of the Periodic Table of the Elements, and silylidene radical containing up to 5 silicon atoms;

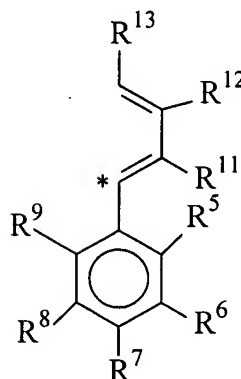
R<sup>1</sup>, is a linear or branched, saturated or unsaturated C<sub>1</sub>-C<sub>40</sub>-alkyl radical, optionally containing one or more heteroatoms belonging to groups 13-17 of the Periodic Table of the Elements;

R<sup>2</sup> is a branched C<sub>1</sub>-C<sub>40</sub>-alkyl radical;

T, equal to or different from each other, is a moiety of formula (IIIa) or (IIIb):



(IIIa)



(IIIb)

wherein:

the atom marked with symbol \* is bonded to the atom marked with the same symbol in the metallocene compound of formula (I), with the proviso that at least one T is a moiety of formula (IIIa);

$R^5$ ,  $R^6$ ,  $R^7$ ,  $R^8$  and  $R^9$ , equal to or different from each other, are hydrogen or a linear or branched, saturated or unsaturated  $C_1$ - $C_{40}$ -alkyl,  $C_3$ - $C_{40}$ -cycloalkyl,  $C_6$ - $C_{40}$ -aryl,  $C_7$ - $C_{40}$ -alkylaryl, or  $C_7$ - $C_{40}$ -arylalkyl radicals, optionally containing one or more heteroatoms belonging to groups 13-17 of the Periodic Table of the Elements; or two or more  $R^5$ ,  $R^6$ ,  $R^7$ ,  $R^8$  and  $R^9$  can join to form a 4-7 membered saturated or unsaturated ring, said ring can bear at least one  $C_1$ - $C_{20}$  alkyl substituent;

$R^{10}$  is ~~hydrogen or~~ a linear or branched, saturated or unsaturated  $C_1$ - $C_{20}$ -alkyl,  ~~$C_3$ - $C_{20}$ -cycloalkyl,~~  ~~$C_6$ - $C_{20}$ -aryl,~~  ~~$C_7$ - $C_{20}$ -alkylaryl,~~ or  ~~$C_7$ - $C_{20}$ -arylalkyl radical,~~ optionally containing one or more

heteroatoms belonging to groups 13-17 of the Periodic Table of the Elements;

$R^{11}$ ,  $R^{12}$  and  $R^{13}$ , equal to or different from each other, are hydrogen or a linear or branched, saturated or unsaturated  $C_1$ - $C_{20}$ -alkyl,  $C_3$ - $C_{20}$ -cycloalkyl,  $C_6$ - $C_{20}$ -aryl,  $C_7$ - $C_{20}$ -alkylaryl, or  $C_7$ - $C_{20}$ -arylalkyl radicals, optionally containing one or more heteroatoms belonging to groups 13-17 of the Periodic Table of the Elements; or two or more  $R^{11}$ ,  $R^{12}$  and  $R^{13}$  can join to form a 4-7 membered saturated or unsaturated ring, said ring can bear at least one  $C_1$ - $C_{20}$  alkyl substituent;

ii) an alumoxane or a compound capable of forming an alkyl metallocene cation; and

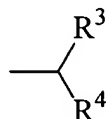
- contacting under polymerization conditions in a gas phase, ethylene with one or more alpha olefins of formula  $CH_2=CHT^2$ , wherein  $T^2$  is a  $C_1$ - $C_{20}$  alkyl radical, and optionally with a non-conjugated diene, in presence of the polypropylene resin.

19. (Previously Presented) The multistage process according to claim 18, wherein the catalyst system further comprises iii) an organo aluminum compound.

20. (Currently Amended) The multistage process according to claim 18, wherein the process of polymerizing a polypropylene resin is carried out in presence of an additional organo aluminum compound.

21. (Previously Presented) The multistage process according to claim 18, wherein M is titanium, zirconium or hafnium; X is hydrogen, a halogen, or R, wherein R is a linear or branched, saturated or unsaturated C<sub>1</sub>-C<sub>20</sub> alkyl, C<sub>3</sub>-C<sub>20</sub> cycloalkyl, C<sub>6</sub>-C<sub>20</sub> aryl, C<sub>7</sub>-C<sub>20</sub> alkylaryl or C<sub>7</sub>-C<sub>20</sub> arylalkyl radical, optionally containing heteroatoms belonging to groups 13-17 of the Periodic Table of the Elements; and L is selected from Si(Me)<sub>2</sub>, SiPh<sub>2</sub>, SiPhMe, SiMe(SiMe<sub>3</sub>), CH<sub>2</sub>, (CH<sub>2</sub>)<sub>2</sub>, (CH<sub>2</sub>)<sub>3</sub> and C(CH<sub>3</sub>)<sub>2</sub>.

22. (Currently Amended) The multistage process according to claim 18, wherein R<sup>1</sup> is a methyl or ethyl radical; R<sup>2</sup> is a group of formula (II):



(II)

wherein R<sup>3</sup> and R<sup>4</sup>, equal to or different from each other, are linear or branched, saturated or unsaturated C<sub>1</sub>-C<sub>10</sub>-alkyl radicals optionally containing one or more heteroatoms belonging to groups 13-17 of the Periodic Table of the Elements; ~~and R<sup>10</sup> is a hydrogen atom or a linear or branched, saturated C<sub>1</sub>-C<sub>20</sub>-alkyl radical.~~

23. (Previously Presented) The multistage process according to claim 18, wherein R<sup>5</sup>, R<sup>6</sup>, R<sup>8</sup> and R<sup>9</sup>, are hydrogen, and R<sup>7</sup> is a group of formula -C(R<sup>14</sup>)<sub>3</sub>, wherein R<sup>14</sup>, equal to or different from each other, are a linear or branched, saturated or unsaturated C<sub>1</sub>-C<sub>10</sub>-alkyl, C<sub>3</sub>-C<sub>10</sub>-cycloalkyl, C<sub>6</sub>-C<sub>10</sub>-aryl, C<sub>7</sub>-C<sub>10</sub>-alkylaryl, or C<sub>7</sub>-C<sub>10</sub>-arylalkyl radicals,

optionally containing one or more heteroatoms belonging to groups 13-17 of the Periodic Table of the Elements.

24. (Cancelled)

25. (Cancelled)

26. (Previously Presented) The multistage process according to claim 23, wherein one T has formula (IIIa), and one T has formula (IIIb).

27. (Currently Amended) The multistage process according to claim 23, wherein one T ~~have~~ is of formula (IIIb), and R<sup>11</sup>, R<sup>12</sup> and R<sup>13</sup> are hydrogen.

28. (Previously Presented) The multistage process according to claim 23, wherein the organic porous polymer has pores having a diameter up to 10  $\mu\text{m}$  (100000 Å) and a porosity higher than 0.1 cc/g.

29. (Previously Presented) The multistage process according to claim 28, wherein the organic porous polymer has pores having a diameter between 0.02  $\mu\text{m}$  (200 Å) and 10  $\mu\text{m}$  (100000 Å).

30. (Previously Presented) The multistage process according to claim 29, wherein at least 30% of the total porosity of the organic porous polymer is comprised of pores having a diameter between 0.1  $\mu\text{m}$  (1000 Å) and 2  $\mu\text{m}$  (20000 Å).

31. (Currently Amended) The multistage process according to claim 18, wherein the polypropylene resin comprises from 5% to 90% by weight of a polypropylene homopolymer or a polypropylene copolymer comprising up to 20% by mol of one or more alpha olefins of formula  $\text{CH}_2=\text{CHT}^1$ , wherein  $\text{T}^1$  is a  $\text{C}_2\text{-C}_{20}$  alkyl radical, and from 10 to 95% by weight, of [[an]] a polyethylene copolymer comprising from 5% to 90% by mol of one or more alpha olefins of formula  $\text{CH}_2=\text{CHT}^2$ , wherein  $\text{T}^2$  is a  $\text{C}_1\text{-C}_{20}$  alkyl radical.

32. (Currently Amended) The multistage process according to claim 31, wherein the polyethylene copolymer comprises up to 20% by mol of a non conjugated diene.

33. (Currently Amended) The multistage process according to claim 31, wherein the polypropylene resin is a polypropylene homopolymer.

34. (Previously Presented) The multistage process according to claim 31, wherein the alpha olefins are selected from propylene and 1-butene.

35. (Currently Amended) A polypropylene polymer composition comprising:

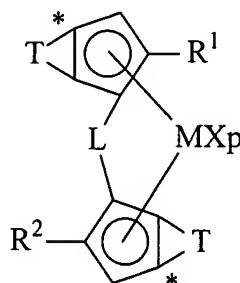
- a) 5% to 90% by weight of a polypropylene homopolymer or a polypropylene copolymer containing up to 20% by mol of derived units of one or more alpha olefins of formula  $\text{CH}_2=\text{CHT}^1$  wherein  $\text{T}^1$  is a  $\text{C}_2\text{-C}_{20}$  alkyl radical; the polypropylene homopolymer or polypropylene copolymer having isotactic pentads (mmmm) higher than 90%;

b) from 10 to 95% by weight of [[an]] a polyethylene copolymer containing from 5% to 90% by mol of one or more alpha olefins of formula  $\text{CH}_2=\text{CHT}^2$ , wherein  $\text{T}^2$  is a  $\text{C}_1\text{-C}_{20}$  alkyl radical;

wherein the polypropylene polymer composition has a flowability index equal to or lower than 2, and the polypropylene polymer composition is produced by the following steps:

- polymerizing a polypropylene resin optionally comprising one or more monomers selected from ethylene and alpha olefins of formula  $\text{CH}_2=\text{CHT}^1$ , wherein  $\text{T}^1$  is a  $\text{C}_2\text{-C}_{20}$  alkyl radical in presence of a catalyst system, the catalyst system supported on a porous organic polymer, comprising:

ii) at least one metallocene compound of formula (I):



(I)

wherein

M is a transition metal selected from those belonging to group 3, 4, 5, 6 or to a lanthanide or actinide group in the Periodic Table of the Elements;

p is an integer from 0 to 3, wherein p is equal to a formal oxidation state of M minus 2;

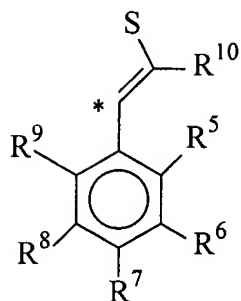


X, same or different, is hydrogen, a halogen, or R, OR, OSO<sub>2</sub>CF<sub>3</sub>, OCOR, SR, NR<sub>2</sub> or PR<sub>2</sub>, wherein R is a linear or branched, saturated or unsaturated C<sub>1</sub>-C<sub>20</sub> alkyl, C<sub>3</sub>-C<sub>20</sub> cycloalkyl, C<sub>6</sub>-C<sub>20</sub> aryl, C<sub>7</sub>-C<sub>20</sub> alkylaryl or C<sub>7</sub>-C<sub>20</sub> arylalkyl radical, optionally containing heteroatoms belonging to groups 13-17 of the Periodic Table of the Elements; or two X can optionally form a substituted or unsubstituted butadienyl radical or OR'O, wherein R' is a divalent radical selected from C<sub>1</sub>-C<sub>20</sub> alkylidene, C<sub>6</sub>-C<sub>40</sub> arylidene, C<sub>7</sub>-C<sub>40</sub> alkylarylidene and C<sub>7</sub>-C<sub>40</sub> arylalkylidene radicals;

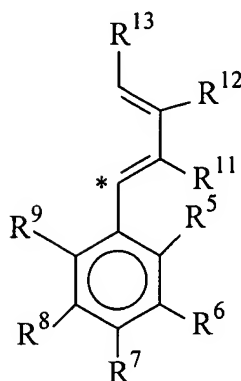
L is a divalent bridging group selected from C<sub>1</sub>-C<sub>20</sub> alkylidene, C<sub>3</sub>-C<sub>20</sub> cycloalkylidene, C<sub>6</sub>-C<sub>20</sub> arylidene, C<sub>7</sub>-C<sub>20</sub> alkylarylidene, or C<sub>7</sub>-C<sub>20</sub> arylalkylidene radicals optionally containing heteroatoms belonging to groups 13-17 of the Periodic Table of the Elements, and silylidene radical containing up to 5 silicon atoms;

R<sup>1</sup>, is a linear or branched, saturated or unsaturated C<sub>1</sub>-C<sub>40</sub>-alkyl radical, optionally containing one or more heteroatoms belonging to groups 13-17 of the Periodic Table of the Elements; R<sup>2</sup> is a branched C<sub>1</sub>-C<sub>40</sub>-alkyl radical;

T, equal to or different from each other, is a moiety of formula (IIIa) or (IIIb):



(IIIa)



(IIIb)

wherein:

the atom marked with symbol \* is bonded to the atom marked with the same symbol in the metallocene compound of formula (I), with the proviso that at least one T is a moiety of formula (IIIa);

$R^5$ ,  $R^6$ ,  $R^7$ ,  $R^8$  and  $R^9$ , equal to or different from each other, are hydrogen or a linear or branched, saturated or unsaturated  $C_1$ - $C_{40}$ -alkyl,  $C_3$ - $C_{40}$ -cycloalkyl,  $C_6$ - $C_{40}$ -aryl,  $C_7$ - $C_{40}$ -alkylaryl, or  $C_7$ - $C_{40}$ -arylalkyl radicals, optionally containing one or more heteroatoms belonging to groups 13-17 of the Periodic Table of the Elements; or two or more  $R^5$ ,  $R^6$ ,  $R^7$ ,  $R^8$  and  $R^9$  can join to form a 4-7 membered saturated or unsaturated ring, said ring can bear at least one  $C_1$ - $C_{20}$  alkyl substituent;

$R^{10}$  is ~~hydrogen or~~ a linear or branched, saturated or unsaturated  $C_1$ - $C_{20}$ -alkyl,  ~~$C_3$ - $C_{20}$ -cycloalkyl,~~  ~~$C_6$ - $C_{20}$ -aryl,~~  ~~$C_7$ - $C_{20}$ -alkylaryl,~~ or  ~~$C_7$ - $C_{20}$ -arylalkyl radical,~~ optionally containing one or more

heteroatoms belonging to groups 13-17 of the Periodic Table of the Elements;

$R^{11}$ ,  $R^{12}$  and  $R^{13}$ , equal to or different from each other, are hydrogen or a linear or branched, saturated or unsaturated  $C_1$ - $C_{20}$ -alkyl,  $C_3$ - $C_{20}$ -cycloalkyl,  $C_6$ - $C_{20}$ -aryl,  $C_7$ - $C_{20}$ -alkylaryl, or  $C_7$ - $C_{20}$ -arylalkyl radicals, optionally containing one or more heteroatoms belonging to groups 13-17 of the Periodic Table of the Elements; or two or more  $R^{11}$ ,  $R^{12}$  and  $R^{13}$  can join to form a 4-7 membered saturated or unsaturated ring, said ring can bear at least one  $C_1$ - $C_{20}$  alkyl substituent;

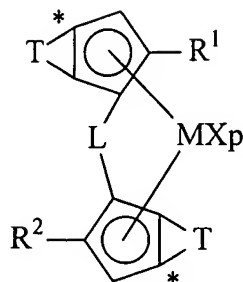
ii) an alumoxane or a compound capable of forming an alkyl metallocene cation; and

- contacting under polymerization conditions in a gas phase, ethylene with one or more alpha olefins of formula  $CH_2=CHT^2$ , wherein  $T^2$  is a  $C_1$ - $C_{20}$  alkyl radical, and optionally with a non-conjugated diene, in presence of the polypropylene resin.

36. (New) A multistage process comprising the following steps:

- polymerizing a polypropylene resin optionally comprising one or more monomers selected from ethylene and alpha olefins of formula  $CH_2=CHT^1$ , wherein  $T^1$  is a  $C_2$ - $C_{20}$  alkyl radical in presence of a catalyst system, the catalyst system supported on a porous organic polymer, comprising:

iii) at least one metallocene compound of formula (I):



(I)

wherein

M is a transition metal selected from those belonging to group 3, 4, 5, 6 or to a lanthanide or actinide group in the Periodic Table of the Elements;

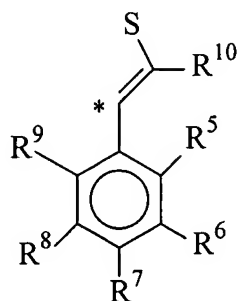
p is an integer from 0 to 3, wherein p is equal to a formal oxidation state of M minus 2;

X, same or different, is hydrogen, a halogen, or R, OR, OSO<sub>2</sub>CF<sub>3</sub>, OCOR, SR, NR<sub>2</sub> or PR<sub>2</sub>, wherein R is a linear or branched, saturated or unsaturated C<sub>1</sub>-C<sub>20</sub> alkyl, C<sub>3</sub>-C<sub>20</sub> cycloalkyl, C<sub>6</sub>-C<sub>20</sub> aryl, C<sub>7</sub>-C<sub>20</sub> alkylaryl or C<sub>7</sub>-C<sub>20</sub> arylalkyl radical, optionally containing heteroatoms belonging to groups 13-17 of the Periodic Table of the Elements; or two X can optionally form a substituted or unsubstituted butadienyl radical or OR'O, wherein R' is a divalent radical selected from C<sub>1</sub>-C<sub>20</sub> alkylidene, C<sub>6</sub>-C<sub>40</sub> arylidene, C<sub>7</sub>-C<sub>40</sub> alkylarylidene and C<sub>7</sub>-C<sub>40</sub> arylalkylidene radicals;

L is a divalent bridging group selected from C<sub>1</sub>-C<sub>20</sub> alkylidene, C<sub>3</sub>-C<sub>20</sub> cycloalkylidene, C<sub>6</sub>-C<sub>20</sub> arylidene, C<sub>7</sub>-C<sub>20</sub> alkylarylidene, or C<sub>7</sub>-C<sub>20</sub> arylalkylidene radicals optionally containing heteroatoms belonging to groups 13-17 of the Periodic Table of the Elements, and silylidene radical containing up to 5 silicon atoms;

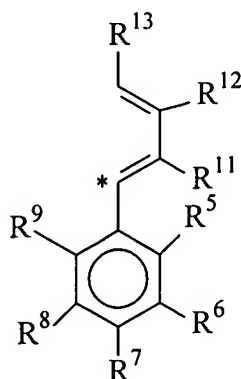
R<sup>1</sup>, is a linear or branched, saturated or unsaturated C<sub>1</sub>-C<sub>40</sub>-alkyl radical, optionally containing one or more heteroatoms belonging to groups 13-17 of the Periodic Table of the Elements; R<sup>2</sup> is a branched C<sub>1</sub>-C<sub>40</sub>-alkyl radical;

one T group is a moiety of formula (IIIa):



(IIIa)

and one T group is a moiety of formula (IIIb):



(IIIB)

wherein:

the atom marked with symbol \* is bonded to the atom marked with the same symbol in the metallocene compound of formula (I);

$R^5$ ,  $R^6$ ,  $R^7$ ,  $R^8$  and  $R^9$ , equal to or different from each other, are hydrogen or a linear or branched, saturated or unsaturated  $C_1$ - $C_{40}$ -alkyl,  $C_3$ - $C_{40}$ -cycloalkyl,  $C_6$ - $C_{40}$ -aryl,  $C_7$ - $C_{40}$ -alkylaryl, or  $C_7$ - $C_{40}$ -arylalkyl radicals, optionally containing one or more heteroatoms belonging to groups 13-17 of the Periodic Table of the Elements; or two or more  $R^5$ ,  $R^6$ ,  $R^7$ ,  $R^8$  and  $R^9$  can join to form a 4-7 membered saturated or unsaturated ring, said ring can bear at least one  $C_1$ - $C_{20}$  alkyl substituent;

$R^{10}$  is a linear or branched, saturated or unsaturated  $C_1$ - $C_{20}$ -alkyl, optionally containing one or more heteroatoms belonging to groups 13-17 of the Periodic Table of the Elements;

$R^{11}$ ,  $R^{12}$  and  $R^{13}$ , equal to or different from each other, are hydrogen or a linear or branched, saturated or unsaturated  $C_1$ - $C_{20}$ -alkyl,  $C_3$ - $C_{20}$ -cycloalkyl,  $C_6$ - $C_{20}$ -aryl,  $C_7$ - $C_{20}$ -alkylaryl, or  $C_7$ - $C_{20}$ -arylalkyl radicals, optionally containing one or more heteroatoms belonging to groups 13-17 of the Periodic Table of the Elements; or two or more  $R^{11}$ ,  $R^{12}$  and  $R^{13}$  can join to form a 4-7 membered

saturated or unsaturated ring, said ring can bear at least one C<sub>1</sub>-C<sub>20</sub> alkyl substituent;

ii) an alumoxane or a compound capable of forming an alkyl metallocene cation; and

- contacting under polymerization conditions in a gas phase, ethylene with one or more alpha olefins of formula CH<sub>2</sub>=CHT<sup>2</sup>, wherein T<sup>2</sup> is a C<sub>1</sub>-C<sub>20</sub> alkyl radical, and optionally with a non-conjugated diene, in presence of the polypropylene resin.

37. (New) The multistage process according to claim 18, wherein R<sup>10</sup> is selected from methyl, ethyl, or isopropyl.

38. (New) The propylene polymer composition according to claim 35, wherein R<sup>10</sup> is selected from methyl, ethyl, or isopropyl.

39. (New) The multistage process according to claim 36, wherein R<sup>10</sup> is selected from methyl, ethyl, or isopropyl.